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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,755	04/23/2001	Vasily A. Topolkarayev	659-1756	4991
757 7590 11/08/2007 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610				
EXAMINER CHOI, PETER Y				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
11/08/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/840,755

Applicant(s)

TOPOLKARAEV ET AL.

Examiner

Peter Y. Choi

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-6, 8, 9, 11, 14, 17, 18, 20-23 and 25-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-6, 8, 9, 11, 14, 17, 18, 20-23 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: _____

FINAL ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 2-6, 8, 9, 11, 14, 17, 18, 20-23, 25, 26 and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Regarding claims 2-6, 8, 9, 11, 14, 17, 18, and 20-23, claim 21, from which the remaining claims depend, recite that “the film is stretched from about 100 to about 500 percent of its original length while in contact with an aqueous solution”. If Applicants are claiming that the *biodegradable* film is stretched, Applicants’ specification and disclosure as originally filed does not support such a limitation wherein the biodegradable film is stretched.

Regarding claims 25 and 26, claim 25 recites that the *water soluble polymer* is stretched from about 100 to about 500 percent of its original length while in contact with an aqueous solution. Applicants’ specification and disclosure as originally filed does not support such a limitation.

Regarding claim 28, the claim recites that the *outer cover layer*, which comprises a stretched blended mixture of a biodegradable polymer and a water soluble polymer, is stretched from about 100 to about 500 percent of its original length while in contact with an aqueous

solution". Applicants' specification and disclosure as originally filed does not support such a limitation wherein the biodegradable polymer and water soluble polymer are stretched or that the outer cover layer is stretched.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2-6, 8, 9, 11, 14, 17, 18, and 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 21, from which the remaining claims depend, recite that "the film is stretched from about 100 to about 500 percent of its original length while in contact with an aqueous solution". Claim 21 recites a biodegradable film and a precursor film. Therefore, reciting "the film is stretched" is indefinite as it may refer to either of the aforementioned films cited in the claim.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-6, 8, 9, 11, 14, 17, 18, 20-23, and 25-28 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USPN 6,514,602 to Zhao.

Regarding claims 2-6, 8, 9, 11, 14, 17, 18, and 20-23, Zhao teaches a personal care product comprising a biodegradable film formed from a stretched precursor film, comprising a blended mixture of a biodegradable polymer and a water soluble polymer, wherein the biodegradable film comprises from about 70% to about 95% biodegradable polymer by weight of the biodegradable film (see entire document including column 2 lines 60-67, column 3 lines 20-35, column 4 lines 55-69, column 7 lines 35-45). It should be noted that the biodegradable thermoplastic polymer and water-soluble thermoplastic polymer are present in the same layer so the Examiner submits that "blended mixture" is present as claimed by Applicants.

Regarding claims 2-6, 8, 9, 11, 14, 17, 18, and 20-23, Zhao does not appear to specifically teach that the film is stretched from about 100 to about 500 percent of its original length while in contact with an aqueous solution. Absent a showing to the contrary, it is Examiner's position that the article of the applied prior art (a biodegradable film comprising a biodegradable polymer and a water soluble polymer in the claimed percentages with the claimed water vapor transmission rate and thickness) is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the

process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. The burden has been shifted to Applicant to show unobvious difference between the claimed product and the prior art product. The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if Applicant intends to rely on Examples in the specification or in a submitted declaration to show unobviousness, Applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claims 2 and 3, the biodegradable film has a water vapor transmission rate of at least about $1000 \text{ g/m}^2/24 \text{ hours}$ (column 7 lines 35-45). Additionally, it would have been obvious to one of ordinary skill in the biodegradable film art at the time the invention was made to optimize the water vapor transmission rate of the film since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In the present case, one of ordinary skill in the biodegradable film art would be motivated to optimize the water vapor transmission rate of the film based on the desired water vapor porosity or air permeability suitable for the desired application.

Regarding claim 4, the biodegradable polymer is an aliphatic polyester (column 5 lines 40-69).

Regarding claim 5, the biodegradable polymer is selected from the group consisting of polycaprolactone, polybutylene succinate, poly(butylene succinate-adipate), polylactic acid, a

terpolymer of terephthalic acid, adipic acid, and 1,4,-butanediol, and copolymers and mixtures thereof (columns 5 and 6).

Regarding claim 6, the water soluble polymer is selected from the group consisting of polyethylene oxide, polyethylene glycol, polyvinyl alcohol, and copolymers and mixtures thereof (column 4 lines 55-69).

Regarding claims 8, 9 and 20, the biodegradable film has an elongation at break of greater than about 100% or greater than about 200% (column 7 lines 10-30).

Regarding claim 11, the biodegradable film includes from about 5% to about 30% water soluble polymer by weight of the biodegradable film (column 2 lines 60-69).

Regarding claim 14, the biodegradable film has a thickness of from about 0.1 to 0.3 mil (column 8 lines 1-30).

Regarding claims 17 and 18, the product is a disposable diaper, training pant, feminine pad, panty liner, incontinence product, wound dressing or delivery system (column 3 lines 30-45).

Regarding claim 22, the stretched precursor film has a water vapor transmission rate of greater than $1000 \text{ g/m}^2/24 \text{ hours}$ (column 7 lines 35-45). Additionally, it would have been obvious to one of ordinary skill in the biodegradable film art at the time the invention was made to optimize the water vapor transmission rate of the film since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In the present case, one of ordinary skill in the biodegradable film art would be motivated to optimize the water vapor transmission rate of the film based on the desired water vapor porosity or air permeability suitable for the desired application.

Regarding claim 23, the water-soluble polymer is polyethylene oxide, polyethylene glycol, or a copolymer thereof (column 4 lines 55-69).

Regarding claims 25 and 26, Zhao teaches a personal care product comprising a biodegradable film formed from a stretched precursor film comprising a blended mixture of a biodegradable polymer and a water soluble polymer, wherein the water soluble polymer is polyethylene oxide, polyethylene glycol, or a copolymer thereof (see entire document including column 2 lines 60-67, column 3 lines 20-35, column 4 lines 55-69, column 7 lines 35-45). It should be noted that the biodegradable thermoplastic polymer and water-soluble thermoplastic polymer are present in the same layer so the Examiner submits that "blended mixture" is present as claimed by Applicants.

Regarding claims 25 and 26, Zhao does not appear to specifically teach that the water soluble polymer is stretched from about 100 to about 500 percent of its original length while in contact with an aqueous solution. Absent a showing to the contrary, it is Examiner's position that the article of the applied prior art (a biodegradable film comprising a biodegradable polymer and a water soluble polymer in the claimed percentages with the claimed water vapor transmission rate and thickness) is identical to or only slightly different than the claimed article.

Regarding claim 26, the biodegradable film has a water vapor transmission rate of at least about $1000 \text{ g/m}^2/24 \text{ hours}$ (column 7 lines 35-45). Additionally, it would have been obvious to one of ordinary skill in the biodegradable film art at the time the invention was made to optimize the water vapor transmission rate of the film since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In the present case, one of ordinary skill in the biodegradable film art would be motivated to optimize the water vapor

transmission rate of the film based on the desired water vapor porosity or air permeability suitable for the desired application.

Regarding claim 27, Zhao teaches a personal care product comprising a biodegradable film formed from a stretched precursor film comprising a blended mixture of a biodegradable polymer and a water soluble polymer, wherein the precursor film was stretched (see entire document including column 2 lines 60-67, column 3 lines 20-35, column 4 lines 55-69, column 7 lines 35-45). Although the Zhao reference does not appear to teach that the biodegradable film was stretched while in contact with an aqueous solution, the prior art structure is identical to the claimed structure. Therefore, the Zhao reference is deemed to anticipate the claimed limitation that the biodegradable film was stretched while in contact with an aqueous solution. It should be noted that the biodegradable thermoplastic polymer and water-soluble thermoplastic polymer are present in the same layer so the Examiner submits that "blended mixture" is present as claimed by Applicants.

Regarding claim 28, Zhao teaches a personal care product comprising an outer cover layer, a liquid permeable liner layer, and an absorbent body between the outer cover layer and the liner layer, wherein the liner layer is bonded to the outer cover layer and to the absorbent body, the outer cover layer comprising a blended mixture of a biodegradable polymer and a water soluble polymer, and wherein the outer cover layer comprises from about 70% to about 95% biodegradable polymer by weight of the outer cover layer (see entire document including column 2 lines 60-67, column 3 lines 20-35, column 4 lines 55-69, column 7 lines 35-45, column 10 line 66 to column 11 line 44). It should be noted that the biodegradable thermoplastic

polymer and water-soluble thermoplastic polymer are present in the same layer so the Examiner submits that "blended mixture" is present as claimed by Applicants.

Regarding claim 28, Zhao does not appear to specifically teach that the film is stretched from about 100 to about 500 percent of its original length while in contact with an aqueous solution. Absent a showing to the contrary, it is Examiner's position that the article of the applied prior art (a biodegradable film comprising a biodegradable polymer and a water soluble polymer in the claimed percentages with the claimed water vapor transmission rate and thickness) is identical to or only slightly different than the claimed article.

In the event it is shown that Zhao does not disclose the claimed invention with sufficient specificity, the invention is obvious because Zhao discloses the claimed constituents and discloses that they may be used in combination.

Response to Arguments

7. Applicants' arguments filed August 30, 2007, have been fully considered but they are not persuasive. Applicants argue that Zhao fails to teach or suggest a blended precursor film that is stretched from about 100 to about 500 times its original length when in contact with an aqueous solution. Applicants argue that stretching the film reduces the surface energy between the film material and the environment, which can lower the stress required to produce a stretched film with a specified draw ratio. Additionally, stretching in water can accelerate the dissolution and etching of the water soluble component of the film by plastically deforming the water soluble component while it is in contact with the solvent, and stretching in solvent increases the breathability of the film, improves its softness, and reduces film thickness.

Regarding Applicants' arguments, Examiner respectfully disagrees. First, although Applicants argue that Zhao fails to teach a precursor film that is stretched from about 100 to about 500 times its original length when in contact with an aqueous solution, Applicants arguments are not commensurate in scope with any of the claims. Independent claim 21 recites that the film is stretched from about 100 to about 500 times, but fails to claim that the *precursor* film is stretched. Independent claim 25 claims that the *water soluble polymer* is stretched from about 100 to about 500 times. Independent claim 27 recites that the precursor film is stretched while in contact with an aqueous solution, but fails to claim that it is stretched from about 100 to about 500 times. Independent claim 28 claims that the outer cover layer, comprising a biodegradable polymer and a water soluble polymer, is stretched, but fails to claim that the *precursor* film is stretched. Dependent claim 22 claims that the precursor film is stretched, but fails to claim that it is stretched from about 100 to about 500 times. Therefore, Applicants' arguments are not commensurate in scope with the claimed invention.

Second, Applicants' argument that stretching the film reduces the surface energy between the film material and the environment, which can lower the stress required to produce a stretched film with a specified draw ratio, is not persuasive. Applicants are not claiming the combination of the film material and an environment, nor claim the surface energy or a specified draw ratio. Additionally, page 14 of Applicants' specification teaches that stretching increases the breathability of the film, improves its softness and reduces film thickness. However, Zhao teaches a substantially similar biodegradable film comprising a biodegradable polymer and a water soluble polymer in the claimed percentages with the claimed water vapor transmission rate and thickness. Additionally, as set forth in the Final Rejection of December 27, 2006, section

11, since the claimed range is not specific, absent unexpected results in the claimed range of greater than about $2500 \text{ g/m}^2/24$ hours and a limitless WVTR, the Zhao reference anticipates the claimed range. Although there may exist many different methods of stretching and processing the film, the biodegradable film of Zhao has substantially the same properties as the claimed invention. Therefore, absent evidence to the contrary, the invention of Zhao appears to anticipate the claimed invention.

8. Claims 2-6, 8, 9, 11, 14, 17, 18, 20-22, 24, 27, and 28 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over USPN 5,200,247 to Wu.

Regarding claims 2-6, 8, 9, 11, 14, 17, 18, 20-22, and 24, Wu teaches a personal care product comprising a biodegradable film formed from a stretched precursor film, comprising a biodegradable polymer and a water soluble polymer, wherein the biodegradable film comprises from about 70% to about 95% biodegradable polymer by weight of the biodegradable film and wherein the film is stretched from about 100 to about 500 percent of its original length (see entire document including column 1 line 59 to column 2 line 58, column 4 lines 3-67, column 5 and 6, Examples 1-6).

Regarding claims 2, 3 and 22, Wu does not appear to teach that the biodegradable film has a water vapor transmission rate of greater than about $2500 \text{ g/m}^2/24$ hours, greater than about $3000 \text{ g/m}^2/24$ hours, and greater than about $3500 \text{ g/m}^2/24$ hours, and that the film is stretched while in contact with an aqueous solution. Although the prior art does not disclose the claimed water vapor transmission rates and stretching technique, the claimed properties are deemed to be

inherent to the structure in the prior art since the Wu reference teaches an invention with a similar structural and chemical composition as the claimed invention (a stretched precursor film, comprising a biodegradable polymer and a water soluble polymer, wherein the biodegradable film comprises from about 70% to about 95% biodegradable polymer by weight of the biodegradable film and wherein the film is stretched from about 100 to about 500 percent of its original length).

Regarding claim 4, the biodegradable polymer is an aliphatic polyester (column 2 line 62 to column 4 line 8).

Regarding claim 5, the biodegradable polymer is selected from the group consisting of polycaprolactone, polybutylene succinate, poly(butylene succinate-adipate), polylactic acid, a terpolymer of terephthalic acid, adipic acid, and 1,4,-butanediol, and copolymers and mixtures thereof (column 2 line 62 to column 4 line 8).

Regarding claim 6, the water soluble polymer is selected from the group consisting of polyethylene oxide, polyethylene glycol, polyvinyl alcohol, and copolymers and mixtures thereof (column 4 lines 11-30).

Regarding claims 8, 9 and 20, the biodegradable film has an elongation at break of greater than about 100% or greater than about 200% (Examples 2 and 3).

Regarding claim 11, the biodegradable film includes from about 5% to about 30% water soluble polymer by weight of the biodegradable film (column 4 lines 22-30, Examples 1-6).

Regarding claim 14, the biodegradable film has a thickness of from about 1-10 mils (column 7 lines 1-17, Examples 1-4, Example 6).

Regarding claims 17 and 18, the product is a disposable diaper, training pant, feminine pad, panty liner, incontinence product, wound dressing or delivery system (column 1 lines 27-40, column 2 lines 50-54).

Regarding claim 24, the precursor film was stretched (column 5 line 7 to column 7 line 17, Examples 2 and 3). Although the Wu reference does not appear to teach that the biodegradable film was stretched while in contact with an aqueous solution, the prior art structure is identical to the claimed structure. Therefore, the Wu reference is deemed to anticipate the claimed limitation that the biodegradable film was stretched while in contact with an aqueous solution.

Regarding claim 27, Wu teaches a personal care product comprising a biodegradable film formed from a stretched precursor film comprising a blended mixture of a biodegradable polymer and a water soluble polymer, wherein the precursor film was stretched (see entire document including column 1 line 59 to column 2 line 58, column 4 lines 3-67, column 5 and 6, Examples 1-6). Although the Wu reference does not appear to teach that the biodegradable film was stretched while in contact with an aqueous solution, the prior art structure is identical to the claimed structure. Therefore, the Wu reference is deemed to anticipate the claimed limitation that the biodegradable film was stretched while in contact with an aqueous solution.

Regarding claim 28, Wu teaches a personal care product comprising an outer cover layer, a liquid permeable liner layer, and an absorbent body between the outer cover layer and the liner layer, wherein the liner layer is bonded to the outer cover layer and to the absorbent body, the outer cover layer comprising a stretched blended mixture of a biodegradable polymer and a water soluble polymer, wherein the outer cover layer is stretched from about 100 to about 500 percent

of its original length, and wherein the outer cover layer comprises from about 70% to about 95% biodegradable polymer by weight of the outer cover layer (see entire document including column 1 line 59 to column 2 line 58, column 4 lines 3-67, column 5 and 6, Examples 1-5). It should be noted that Applicants have not associated structures corresponding to the absorbent body and the liner layer. As Wu teaches that the film maybe extruded into two or three or more layers (column 4 lines 31-34), the outer extruded film is analogous to the claimed outer cover layer and the remaining layers of film are analogous to the claimed liner layer and absorbent body.

Although the Wu reference does not appear to teach that the biodegradable film was stretched while in contact with an aqueous solution, the prior art structure is identical to the claimed structure. Therefore, the Wu reference is deemed to anticipate the claimed limitation that the biodegradable film was stretched while in contact with an aqueous solution.

In the event it is shown that Wu does not disclose the claimed invention with sufficient specificity, the invention is obvious because Wu discloses the claimed constituents and discloses that they may be used in combination.

Response to Arguments

9. Applicants' arguments filed August 30, 2007, have been fully considered but they are not persuasive. Applicants argue that Wu does not disclose the technique of processing a film. It should be noted that Applicants recite that independent claims 21, 27 and 28 have been amended to recite a stretched precursor film. However, claim 27 has not been amended and claims 21 and 28, as set forth above, do not claim a stretched precursor film. Therefore, Applicants' arguments are not commensurate in scope with the claimed invention.

Examiner disagrees in that the claimed invention does not recite a technique of processing a film. Applicants have not set forth evidence that the product formed by the stretching techniques set forth in Wu is not substantially similar to the claimed invention, or similarly that the product-by-process techniques produce the claimed product which is different than the product of Wu. Therefore, the claims remain rejected.

Claim Rejections - 35 USC § 103

10. Claims 2-6, 8, 9, 11, 14, 17, 18, 20-23, and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhao in view of USPN 5,549,775 to Odorzynski.

Regarding claims 2-6, 8, 9, 11, 14, 17, 18, 20-23, and 25-28, in the event it is shown that Wu does not disclose the claimed water vapor transmission rates, Odorzynski discloses that it was known in the disposable diaper art to form a vapor permeable microporous film to be used in a disposable diaper wherein the vapor permeable film has a water vapor transmission rate of at least about 2500 g/m²/24 hours, suitably at least about 3000 g/m²/24 hours, and alternatively at least about 4200 g/m²/24 hours (Odorzynski, column 1 lines 6-9, column 10 lines 18-66, Figure 2). It would have been obvious to one of ordinary skill in the diaper art at the time the invention was made to optimize the water vapor transmission rate of the vapor permeable film, as taught by Zhao, to the claimed ranges, since discovering an optimum value of a result effective variable, here the water vapor transmission rate, involves only routine skill in the art and Odorzynski teaches that it was known in the art to form films in disposable diapers with the claimed water vapor transmission rates.

11. Claims 2-6, 8, 9, 11, 14, 17, 18, 20-22, 24, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Odorzynski.

Regarding claims 2-6, 8, 9, 11, 14, 17, 18, 20-22, 24, 27, and 28, in the event it is shown that the claimed water vapor transmission rates are not inherent to the structure of Wu, Odorzynski discloses that it was known in the disposable diaper art to form a vapor permeable microporous film to be used in a disposable diaper wherein the vapor permeable film has a water vapor transmission rate of at least about $2500 \text{ g/m}^2/24$ hours, suitably at least about $3000 \text{ g/m}^2/24$ hours, and alternatively at least about $4200 \text{ g/m}^2/24$ hours (Odorzynski, column 1 lines 6-9, column 10 lines 18-66, Figure 2). It would have been necessary and thus obvious to look to the prior art for conventional water vapor transmission rates for films. As Odorzynski provides this conventional teaching, it would have been obvious to one of ordinary skill in the diaper art at the time the invention was made to form the vapor permeable film, as taught by Wu, with the water vapor transmission rates, as taught by Odorzynski, motivated by the desire of forming a durable and flexible film suitable for application as a vapor permeable film on a diaper.

Response to Arguments

12. Applicants' arguments filed August 30, 2007, have been fully considered but they are not persuasive. Applicants argue that Odorzynski does not teach a technique of processing a formed film by stretching it in contact with an aqueous solution, and thus it would not have been obvious to one of skill in the art to modify the references to meet the limitations of the claimed invention. Examiner respectfully disagrees. Odorzynski is relied on to teach that it was known in the diaper art at the time the invention was made to optimize the water vapor transmission rate of the vapor

permeable film of Zhao and Wu, to the claimed ranges, since discovering an optimum value of a result effective variable, here the water vapor transmission rate, involves only routine skill in the art and Odorzynski teaches that it was known in the art to form films in disposable diapers with the claimed water vapor transmission rates. Odorzynski is not relied on to teach a technique of processing a formed film by stretching it in contact with an aqueous solution as both Zhao and Wu teach a method of stretching. Applicants have not submitted evidence that forming the films of Zhao and Wu with the water vapor transmission rate taught by Odorzynski would not have been obvious to one of ordinary skill in the diaper art. Additionally, as set forth above, Applicants' arguments of any structural or compositional disparities between the prior art and the claimed invention are not commensurate in scope with the invention claimed.

13. Claims 23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu, as applied to claims 2-6, 8, 9, 11, 14, 17, 18, 20-22, 24, 27, and 28 above, in view of Zhao.

Regarding claims 23, 25 and 26, Wu does not appear to teach that the water soluble polymer is polyethylene oxide, polyethylene glycol, or a copolymer thereof. However, Wu teaches that the water soluble polymer may be polyvinyl alcohol, which is blended with the biodegradable polycaprolactone polymer. Zhao teaches a similar stretched biodegradable film comprising a biodegradable polycaprolactone polymer and a water soluble polymer, wherein the water soluble polymer may be polyvinyl alcohol, polyethylene oxide, and polyethylene glycol (Zhao, column 4 line 57 to column 6 line 49). It would have been obvious to one of ordinary skill in the biodegradable film art to form the biodegradable film of Wu with a water soluble polymer which is equivalent to polyvinyl alcohol such as polyethylene oxide and polyethylene

glycol, as taught by Zhao, since the substitution of known equivalent structures involves only ordinary skill in the art. One of ordinary skill in the biodegradable film art would be motivated to form the biodegradable film of Wu with polyvinyl alcohol or a known equivalent structure such as polyethylene oxide and polyethylene glycol to form a conventional, durable, and flexible biodegradable film suitable for diaper or sanitary napkin applications.

Regarding claims 25 and 26, Wu teaches a personal care product comprising a biodegradable film formed from a stretched precursor film comprising a blended mixture of a biodegradable polymer and a water soluble polymer (see entire document including column 1 line 59 to column 2 line 58, column 4 lines 3-67, column 5 and 6, Examples 1-6).

Regarding claim 26, Wu does not appear to teach that the biodegradable film has a water vapor transmission rate of greater than about $2500 \text{ g/m}^2/24$ hours. Although the prior art does not disclose the claimed water vapor transmission rates, the claimed properties are deemed to be inherent to the structure in the prior art since the Wu reference teaches an invention with a similar structural and chemical composition as the claimed invention (a stretched precursor film, comprising a biodegradable polymer and a water soluble polymer, wherein the biodegradable film comprises from about 70% to about 95% biodegradable polymer by weight of the biodegradable film).

Response to Arguments

14. Applicants' arguments filed August 30, 2007, have been fully considered but they are not persuasive. Applicants reiterate that neither Zhao nor Wu teach each and every element of the claimed invention, namely that the formed precursor film be stretched while in contact with an

aqueous solution. Examiner respectfully disagrees. As set forth above, independent claims 21 and 25 do not claim a precursor film stretched while in contact with an aqueous solution. Additionally, the invention of Wu in view of Zhao appears to teach a substantially similar structure and composition as the claimed invention. Therefore, the claims remain rejected.

15. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Zhao, as applied to claim 25 above, and further in view of Odorzynski.

Regarding claim 26, in the event it is shown that the claimed water vapor transmission rate is not inherent to the structure of Wu in view of Zhao, Odorzynski discloses that it was known in the disposable diaper art to form a vapor permeable microporous film to be used in a disposable diaper wherein the vapor permeable film has a water vapor transmission rate of at least about $2500 \text{ g/m}^2/24 \text{ hours}$, suitably at least about $3000 \text{ g/m}^2/24 \text{ hours}$, and alternatively at least about $4200 \text{ g/m}^2/24 \text{ hours}$ (Odorzynski, column 1 lines 6-9, column 10 lines 18-66, Figure 2). It would have been necessary and thus obvious to look to the prior art for conventional water vapor transmission rates for films. As Odorzynski provides this conventional teaching, it would have been obvious to one of ordinary skill in the diaper art at the time the invention was made to form the vapor permeable film, as taught by Wu and Zhao, with the water vapor transmission rate, as taught by Odorzynski, motivated by the desire of forming a durable and flexible film suitable for application as a vapor permeable film on a diaper.

Response to Arguments

16. Applicants' arguments filed August 30, 2007, have been fully considered but they are not persuasive. Applicants reiterate that neither Zhao nor Wu nor Odorzynski teach each and every element of the claimed invention. Examiner respectfully disagrees in that the invention of Wu in view of Zhao and further in view of Odorzynski appears to teach a substantially similar structure and composition as the claimed invention. Therefore, the claims remain rejected.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Y. Choi whose telephone number is (571) 272-6730. The examiner can normally be reached on Monday - Friday, 08:00 - 15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew T Piziali/
Primary Examiner, Art Unit 1794

/Peter Y. Choi/
Examiner, Art Unit 1794
November 5, 2007